Random Notes

Out-of-place stuffs...

Computer Network IP Addresses

In the original IPV4 scheme, there are 5 classes for IP addresses. NA= Network address, HA = host address. NA = 0 implies local network, HA = 0 implies broadcast, HA = 1 usually for gateways (router @ interface address).

1. **CLASS A** Format: 1-bit ID [0] | 7-bit NA | 3-byte HA ; Range: 1.x.x.x - 126.x.x.x (0.x.x.x & 127.x.x.x reserved) ; Net-Mask: 255.0.0.0
2. **CLASS B** Format: 2-bit ID [10] | 14-bit NA | 2-byte HA ; Range: 128.x.x.x - 191.x.x.x ; Net-Mask: 255.255.0.0
3. **CLASS C** Format: 3-bit ID [110] | 21-bit NA | 1-byte HA ; Range: 192.x.x.x - 223.x.x.x ; Net-Mask: 255.255.255.0
4. **CLASS D** Format: 4-bit ID [1110] | 28-bit multicast address
5. **CLASS E** Format: 5-bit ID [11110] | 27-bit reserved
6. **Private Net Addresses (RFC1918)** Range1: 10.0.0.0 - 10.255.255.255 ; Range2: 172.16.0.0 - 172.31.255.255 ; Range3: 192.168.0.0 - 192.168.255.255

Subnet Mask is a method used to obtain more network groups from existing classes. HA is masked with a *subnet mask* and used as NA.

In the newer IPv4 implementation, masks are no longer fixed - classes are no longer used to define a network. IPV4 notation takes the form of x.x.x.x/y where x is an 8-bit number and y gives the number of bits used to mask out the network address.

Video Notes

NTSC

- used mainly in US, Japan
- 60 Hz, 525 lines at 30 fps (480i)
- resolution ⇒ 720 x 480 (DVD-NTSC?)

PAL

- used mainly in UK, Europe, SE Asia
- 50 Hz, 625 lines at 25 fps (576i)
- resolution ⇒ 720 x 576 (DVD-PAL?)

Standard	Supported Aspect Ratio
MPEG	1:1 4:3 2.11:1 16:9
TV	4:3 16:9

Settings	Resolution
Fullscreen (Std)	4:3

Settings	Resolution
Widescreen	16:9 (LetterBox)
Widescreen	16:9 (Anamorphic)

Issue Running ImageMagick's Convert

I got the following error message

```
convert-im6.q16: attempt to perform an operation not allowed by the security policy `EPS'
```

I got the solution from here. It turns out, there is a security feature that we need to grant. Edit file `/etc/ImageMagick-6/policy.xml`. Find the following line,

```
<policy domain="coder" rights="none" pattern="EPS" />
```

and change the `rights` value to `read|write`.

Live Video Streaming using ffmpeg

Dumping this here as it is for now...

```
# may run on ramdisk?

- hls?

ffmpeg -f v4l2 -i /dev/video0 -strict experimental -pix_fmt yuv420p playlist.m3u8

- generic segmenter?

ffmpeg -f v4l2 -framerate 25 -video_size 640x480 -i /dev/video0 -f segment -segment_time 10 -segment_format_options movflags=+faststart out%03d.mp4

- option to place keyframe every 2s (every 50 frames at 25fps)

  -c:v libx264 -r 25 -g 50

*note: segment_time should be multiple of keyframe interval

We need to modify /etc/apache2/mods-available/mime.conf

AddType application/x-mpegURL .m3u8
AddType video/MP2T .ts
```

Analysis of Android (cheap, china made) disk parition layout

Dumped...

```
https://spflashtool.com/download/
SP_Flash_Tool-5.1916_Linux.zip

=> ./adb shell

$ cat /proc/mtd
dev:    size   erasesize  name
$ cat /proc/dumchar_info
Part_Name    Size                StartAddr           Type MapTo
preloader    0x0000000000880000  0x0000000000000000  2    /dev/misc-sd
mbr          0x0000000000080000  0x0000000000000000  2
/dev/block/mmcblk0
ebr1         0x0000000000080000  0x0000000000080000  2
/dev/block/mmcblk0p1
pro_info     0x0000000000300000  0x0000000000100000  2
/dev/block/mmcblk0
nvram        0x0000000000500000  0x0000000000400000  2
/dev/block/mmcblk0
protect_f    0x000000000a00000   0x0000000000900000  2
/dev/block/mmcblk0p2
protect_s    0x000000000a00000   0x0000000001300000  2
/dev/block/mmcblk0p3
seccfg       0x0000000000020000  0x0000000001d00000  2
/dev/block/mmcblk0
uboot        0x0000000000060000  0x0000000001d20000  2
/dev/block/mmcblk0
bootimg      0x0000000000600000  0x0000000001d80000  2
/dev/block/mmcblk0
recovery     0x0000000000600000  0x0000000002380000  2
/dev/block/mmcblk0
sec_ro       0x0000000000040000  0x0000000002980000  2
/dev/block/mmcblk0
misc         0x0000000000080000  0x00000000029c0000  2
/dev/block/mmcblk0
logo         0x0000000000300000  0x0000000002a40000  2
/dev/block/mmcblk0
expdb        0x000000000a00000   0x0000000002d40000  2
/dev/block/mmcblk0
android      0x0000000035200000  0x0000000003740000  2
/dev/block/mmcblk0p4
cache        0x000000000e200000  0x0000000038940000  2
/dev/block/mmcblk0p5
usrdata      0x000000009e360000  0x0000000046b40000  2
```

```
/dev/block/mmcblk0p6
bmtpool      0x0000000001500000   0x00000000ff7700a8   2
/dev/block/mmcblk0
Part_Name:Partition name you should open;
Size:size of partition
StartAddr:Start Address of partition;
Type:Type of partition(MTD=1,EMMC=2)
MapTo:actual device you operate

$ getprop ro.build.ab_update
- returns nothing... so, using A-only partition scheme (instead of newer A-B
scheme)
```

From:
https://www.azman.my1matrix.cc/ - **Azman @MY1**

Permanent link:
https://www.azman.my1matrix.cc/doku.php?id=notes:random&rev=1770522381

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